Electronic Operating Manual (EOM) Compliance

I Carl Simmers, Business Manager for Distillation and Reforming, certify the Electronic Operating Manual for Distillation and Reforming is current and accurate as defined by 29CFR 1910. Detailed carry-over items are listed at the end of this document and are not included in the certification.

ABU Manager Signature (or designate)

1/- 23- 200 9 Date

Electronic Operating Manual Content	Enter Date 11/24/09				
	Annual Certification Required for PSM ¹	MOC Updates Procedure	EMMS Review Freq ²	Verification pre and post Training	Field ³ Verification Pre and Post use review
Volume I: - PROCESS & EQUIPMENT DESCRIPTION			·		
Introduction	✓	Yes	Triennial		
 Process Information 	✓	Yes	Triennial		
 Safety Information 	✓	Yes	Triennial		
Environmental	✓	Yes	Triennial		
 Normal Operations 	✓	Yes	Triennial		
 Equipment Description 	1	Yes	Triennial		The state of the s
 Utilities 	1	Yes	Triennial		
CONSEQUENCE OF DEVIATION (COD) for Richmond Refinery includes system controls, operating limits, and troubleshooting.	1	Yes	Triennial		
Volume II:- NORMAL PROCEDURES:			100		
2000 - Startup Procedures	✓	Yes	Pre-use		YES
3000 - Shutdown Procedures	✓	Yes	Pre-use		YES

¹ Per PSM requirements, the business unit needs to certify these procedures as current and accurate annually.

² Annual Procedure Review Database (APR) contains all maintenance and operating procedures requiring regular review
3 Field Verification captures comments on procedure clarity and accuracy after use. These are forwarded to the document owner to be
included in the next update (minor changes) or to be done immediately (critical updates). Field verifications are required after use if
concerns have been raised about the clarity or accuracy of the procedure.

2009 – PSM Compliance Certificate

Electronic Operating Manual Content	Enter Date 11/24/09				
	Annual Certification Required for PSM ¹	MOC Updates Procedure	EMMS Review Freq ²	Verification pre and post Training	Field ³ Verification Pre and Post use review
4000 - Equipment Related Procedures	✓	Yes	Triennial		Yes
5000 - System Procedures.	✓	Yes	Triennial		Yes
9000 - TEMPORARY PROCEDURES					
Routine Duties	✓	Yes	Triennial	is a support them are in or	
Alarm Test/Response	✓	Yes	Triennial		Yes
CHECKLISTS (Any series):	√	Yes	Triennial		
Volume III: - EMERGENCY PROCEDURES:					;
■ 100 - Emergency Shutdown.	√	Yes	Post-use and Triennial		Yes
200 - Loss of Utilities	√	Yes	Post-use and Triennial		Yes
 300 - Loss of Critical Systems and Components 	✓	Yes	Post-use and Triennial		Yes
400 - Unusual Occurrences.	✓	Yes	Post-use and Triennial		Yes
Emergency Procedure orange binders are available in control rooms containing current emergency procedures.	✓	Yes	Triennial		Yes
Volume IV: - TRAINING GUIDE 7:	• ;				
Common Job Tasks					
Operator Job Break In					
■ Lesson Plans				5 years	
■ Job aids	✓	Yes	Triennial		Yes
 Instructor Qualifier Guides 				5 years	
■ Break In Checklist	· · · · · · · · · · · · · · · · · · ·			5 years	
Situationals				5 years	
 Solo Oral and Written Tests 				5 years	
 Panel Oral and Written Tests 	W-18-1-10-1			5 years	

^{**}Detailed Carry-Over Items listed on next page**

Rev. 2008 / HES-Compliance Coordinator L&D – Manuals & Procedures

EMMS - Job Aid Status

Monday, November 23, 2009

ABU	Plant	Document Type	Total Documents for Reviewer	Reviewer Completed	Outstanding	Total Documents for Trainer	Trainer Completed	Outstanding	Archive Total
D&R									
	4Crude	Job Aid	51	51	0	2	1	1	
	4Rheniformer	Job Aid	6	6	0 .				
	5H2S	Job Aid	4	4	0				
	5-NHT	Job Aid	5	5	0				
	5Rheniformer	Job Aid	1	1	0				
	Caustic Scrubber	Job Aid	13	13	0				
	DEBRU	Job Aid	5	5	0				
	DHT	Job Aid	7	7	0				1
	GHT	Job Aid	3	3.	0				
	ЈНТ	Job Aid	7	7	0				
	K-900	Job Aid	1	1	0				
	Naphtha Splitter	Job Aid	4	4	. 0				
	Penhex	Job Aid	35	35.	0				
	Reformate Splitter	Job Aid	4	4	0				
	Utilities	Job Aid	1	1	0				
		Total:	147	147	0	2	1	1	1
		Reviewer Comp	pletion Percent:	100.00%	Trainer	Completion Percent:	50.00%		
		Total	: 147	147	0	2	1	1	

Reviewer Completion Percent: 100.00%

Trainer Completion Percent: 50.00%

EMMS - Status

Thursday, November 19, 2009

ABU	Plant	Document Type	Total Documents for Reviewer	Reviewer Completed	Outstanding	Total Documents for Trainer	Trainer Completed	Outstanding	Total Archive	
D&R				,						
	4Crude	Alarms	13	13	0					
	4Crude	Checklist	9	9	0					
	4Rheniformer	Alarms	7	7	0					
	4Rheniformer	Checklist	1	1	0					
	5H2S	Alarms	1	1	0					
	5H2S	Checklist	13	13	0					
	5-NHT	Alarms	9	9	0	1	1	0		
!	5-NHT	Checklist	3	3	0					
	5Rheniformer	Alarms	7	7	0					
t	5Rheniformer	Checklist	2	2	0					
	Caustic Scrubber	Checklist	2	2	0					
	DHT	Alarms	4	4	0					
	DHT	Checklist	1	1	0				•	
į	ТНС	Alarms	12	12	0	1	1	0		
:	ТНС	Checklist	3	3	0					
	K-3950 Relief	Alarms	4	4	0					
	K-900	Checklist	1	1	0					
	Naphtha Splitter	Checklist	2	2	0					
	Penhex	Checklist	4	4	0					
	Reformate Splitter	Checklist	2	2	0	•				
· :	Utilities	Checklist	1	1	0					
			101	101	0	2	2	0		
		ABU	Reviewer Completion Pe	ercent: 100.0	0%	Trainer Co	ompletion Perc	ent: 100.00%		

Page 1 of 2

EMMS - Status

Thursday, November 19, 2009

ABU	Plant	Document Type	Total Documents for Reviewer	Reviewer Completed	Outstanding	Total Documents for Trainer	Trainer Completed	Outstanding	Total Archive
		Grand Total:	101	101	0	2	2	0	

Reviewer Completion Percent: 100.00%

Trainer Completion Percent: 100.00%

11/23/2009 10:03:07 AM

Plan 4 Crude					
ЕОМ	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	19620	1/9/200	9 D&R / 4Cu / V-1102 Sample Station Modification	Still Stage 1. Working with business unit trainer to determine impact of this MOC on EOM. Does this change affect how the sample is taken? Maybe job aid and or training material?	N/A
	19969	3/11/20	0 Re-range 11FI506 (ATCR to E1108) transmitter	Still Stage 1. Working with business unit trainer to determine impact of this MOC on EOM. Maybe COD.	N/A
	20012	3/18/20	0 Add a Temperature alarm for F-1100B Bridge Wall	Working with business unit trainer to determine impact of this MOC on EOM. Maybe COD.	N/A
	20015	3/18/20	O Change furnace damper control in on F1160 to cost variable.	Still Stage 1. Working with business unit trainer to determine impact of this MOC on EOM. May affect	N/A
	20264	5/5/200	9 Turn power off to disable the furnace CO analyzers that have failed or have unreliable	Stage 2. Partnering with business unit trainer to determine impact of this MOC on EOM F100A, F1100B and F1160.	N/A
	20941	10/7/20	O Run tubing to route steam trap from resid strainers to nearby condensate header.	Still Stage 1	N/A
	21003	10/19/2	0 add 4 block valves D/S of N2 rotometers on K- 1171A	Still Stage 1	N/A
	21023	10/21/2	0 Installation of new exchanger E-1165C in	Still Stage 1	N/A
	21024	10/21/2	0 Demolition of E-1167 foundation	Still Stage 1	N/A

11/23/2009 10:03:07 AM

Plan 4 Crude		•			
ЕОМ	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	21198	11/18/20	De-Commission Vaccum Overflash System	Still in Stage 1.	N/A
				Partnering with business unit trainer to determine impact of this MOC on EOM. - If Critical/ seldom task or New Task/Equipment - it may require procedure or Process & Equipment Information in Volume I. - If Alarms may impact Alarm Test/Response Procedures and/or COD Tables. - Process controls for level, temperature, pressure, rate HI/Lo may be impacted. - If removing dead legs, or out of service equipment - may impact Process & Equipment Description in Volume I.	
Yes - PSM Requirement					
	20681	8/10/200	2 Exapilot Release 2: incorporate Advanced Programming Tools into Existing Emergency Procedures	R001 - EXAPILOT- This will impact specific operating procedures assigned to this project.	No
	20682	8/10/200	D Exapilot Release 3: integration of advanced programming tools into 4 Crude Unit Start-up/Shutdown Procedures	R001 - EXAPILOT- This will impact specific operating procedures assigned to this project.	No

11/23/2009 10:03:07 AM

Plan 4Rhen					
EOM	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	19732	1/30/20	0 4Rhen - E-3580A & B - Installation of New Heat Exchangers & Piping	9/18/2009 This MOC is still in the planning phase. Will revisit when work begins.	N/A
				11/19/2009 No change. Carry over to 2010.	
	19794	2/10/20	0 4Rhen - E-3575 - Caustic Injection Orifice Flanges	11/18/2009 This MOC is still in planning phase. Will revisit 1st Qtr 2010 to determine impact.	N/A
	20059	3/30/20	0 4 Rhen K3550 EBV S/D bypass during slow roll	9/18/2009 MOC is in planning phase. Will revisit when work begins.	N/A
				11/19/2009 No change. Carry over to 2010.	
	20156	4/10/20	0 4Rhen - P-3590 & A - Startup Recirculation Piping Changes	9/18/2009 Still in planning phase.	N/A
			The state of the s	11/19/2009 No change in status. Carry over to 2010.	
	20903	9/29/20	0 K-3550 Anti-Surge Position Indication	11/18/2009 This MOC does not appear to impact the EOM but will confirm with Trainer as MOC progresses. Carryover to 2010.	N/A
	21132	11/9/20	0 Change V-3599 high level alarm point	11/18/2009 This is a new MOC that may impact the 4Rhen COD table. Will revisit as scope develops. Carryover to 2009.	N/A
Yes - PSM Requirement					
	20798	9/3/200	9 K-3550 Start up Procedure and K-3550 Start up Checklist	11/18/2009 New procedure and checklist are currently in "mark-up" format. Carryover to 2010.	No

11/23/2009 10:03:07 AM

Still Stage 1

ABU: D&R

Plan	5H2S
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EOM	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet				•	

21029 10/22/20 5H2S: T-3146 Temporary Facilities Project Tie-

N/A

11/23/2009 10:03:07 AM

Plan 5Rhen	мос	Date			Revision
EOM	Number	Issue	Project/Equipment	Notes	Complete
Under Review - Not yet			•		
	19708	1/28/20	00 modifiy sample station for h2 on K3550 & K550	11/18/2009 This MOC is still in the planning phase. Carryover to 2009.	N/A
	19762	2/5/200	9 Install P-551/A Suction Pressure Transmitter	5/7/09 Unclear if this MOC will impact the EOM. Appears to be in planning phase.	No
·				11/18/2009 No change. Carryover to 2010.	

11/23/2009 10:03:07 AM

Plan D&R General					
ЕОМ	MOC Number	Date Issue Project/Equipment	Notes	Revision Complete	
Under Review - Not yet					
	20854	9/17/200 VOC Collection System	11/18/2009 Unclear if this MOC will impact the EOM. Still in planning phase. Carryover to 2010.	N/A	
	21212	11/19/20 No Radiography inspection of nozzles on Small Lube Oil filters (K-245B, K-245A, K-210B, K- 210A, K-206B, K-206A, K-205B, K-205A, K- 204B, K-204A)	Still Stage 1	N/A	

11/23/2009 10:03:07 AM

Plan DHT	MOC	Dete		
EOM	MOC Number	Date Issue Project/Equipment	Notes	Revision Complete
Under Review - Not yet				
	20927	10/2/200 Bring DHT FSC graphics to current standard	Still Stage 1	N/A
Yes - PSM Requirement				
	21191	11/17/20 Convert DHT procedures from temporary to permenant (9015, 9016, 9017 and 9020).	Still Stage 1.	N/A

11/23/2009 10:03:08 AM

Plan GHT					
ЕОМ	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	20799	9/3/200	9 Install warm up line on P-1670 and P-1670A	Still Stage 1	N/A
	21193	11/17/2	O Combined feed and product out sample point basins need to be hard piped to a process sewer	Still Stage 1	N/A
Yes - PSM Requirement					
	20848	9/16/20	0 P-1677/A Gas Seal Low Pressure Alarm Set Point	Partnering with business unit to confirm change. Still in Stage 2.	No
	21076	10/30/2	New emergency procedure for routing GHT products off test.	Still in Stage 1.	N/A

11/23/2009 10:03:08 AM

Plan H2BC EOM	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	20267	5/5/200	9 K-900 / K-900-A, Remove McCord Lubricator Pressure from Motor Permissive Start	11/23/2009 this MOC is in the planning phase. Revisit when work begins.	N/A

11/23/2009 10:03:08 AM

Plan JHT					
EOM	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	20721	8/18/20	0 V260 stm coil condensate	11/18/2009 Impact to the EOM is unclear. Will verify with Trainer.	N/A
	21087	11/3/20	O Decreasing V-260 high level alarm from 50% to 34%.	11/18/2009 Impact to the EOM is unclear. Will verify impact with Trainer.	N/A
	21183	11/16/2	O Re-configure JHT antisurge set point, 36FC003.sp, to be automatically set at a fixed	11/18/2009 This is a new MOC. Impact to EOM will be revisited 1st qtr 2010.	N/A

11/23/2009 10:03:08 AM

Plan LSFO Flare					
ЕОМ	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	20701	8/13/20	0 K-3950'S LUBE OIL COOLER E-3952	Still in Stage 1. Working with business unit to	N/A

11/23/2009 10:03:08 AM

Plan Naptha Splitter					-
ЕОМ	MOC Number	Date Issue	Project/Equipment	Notes	Revision Complete
Under Review - Not yet					
	20088	4/2/200	9 P-4411's APS alarm check to relief	9/18/2009 This MOC is still in the planning phase, but does appear to impact the EOM. Will verify with trainer.	N/A
				11/23/2009 No change. Carry over to 2010.	
Yes - PSM Requirement					•
	21083	11/2/20	O Add step to Naphtha Splitter procedure to open balance line on E-4413A/B during start up.	11/18/2009 New procedure still in planning phase. Carryover to 2010.	No

11/23/2009 10:03:08 AM

Flan Penhex EOM	MOC Number	Date Issue Project/Equipment	Notes	Revision Complete
Yes - PSM Requirement				
	20734	8/19/200 Penhex Exapilot Procedure Upgrade fo	r Driers 11/18/2009 This project will stretch into 2010. Carryover.	No

11/23/2009 10:03:08 AM

Plan Utilities EOM	MOC Number	Date Issue Project/Equipment	Notes	Revision Complete
Under Review - Not yet				
	20842	9/15/200 D&R / Utilities / V-3206 Vibration Reduction	11/18/2009 Impact to the EOM unclear. Will revisit as scope is more clearly defined. Carryover to 2010.	N/A

11/23/2009 10:02:28 AM

Plan	4 Crude
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EOM Revision	MOC Number	Date Issued	Project/Equipment Title	Notes	Revision Complete
Under Review - Not yet determine					
	18839	8/4/2008	Update Handheld Readings for CUA job.	Carry Over 2010 - Still evauluating. Carry Over 2009. May impact Alarm Test/Response procedures. May only impact hand helds. Need confirmation from business unit.	N/A
	18850	8/6/2008	F1100A, B, F1160 - Perform Burner Pressure Test	Carry Over 2010. Carry Over 2009. Stage 1. Need confirmation from business unit. May affect safe furnace firing re: start up / shut down or speciality procedure.	N/A

11/23/2009 10:02:29 AM

Plan D&R General			•		
EOM Revision	MOC Number	Date Issued	Project/Equipment Title	Notes	Revision Complete
Under Review - Not yet determine					
	18510	5/19/2008	Environmental mitigation, New Fuel gas Analyzer & Shelter at D&R	Carry Over 2009. 6/24/2008 This project still in the planning phase. Will investigate any impact to the EOM.	N/A
				11/18/2009 No progress on this MOC. I will verify status with the Trainer.	
Yes - PSM Requirement					
	19437	.1/24/2008	DMC Controller Cleanup	11/25/2008 Have posted 5 updates and will verify if there any more.	No
				11/18/2009 Sent an inquiry to Adam Lovano to verify status. *This is still being worked by Lovano with assistance from Bill Nelson and Don Cook. Will revisit 1st qtr 2010 for close out.	

11/23/2009 10:02:29 AM

Plan	DHI
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EOM Revision	MOC Number	Date Issued	Project/Equipment Title	Notes	Revision Complete
Under Review - Not yet determine					
	18250	3/11/2008	V1620 Oil Level Control Scheme Change	Carry Over 2010 - Working with business unit trainer to determine impact of this MOC on EOM. Carry Over 2009. Seeking clarification form busniness unit. Alarm procedures? This project still in planning phase. Unclear if this variation impacts EOM. Will verify with business unit personnel.	N/A